



WEB SITE STANDARDS AND GUIDELINES — VERSION 1.1/2002

The New Jersey State Web Site Standards and Guidelines herein establishes the minimum standards to be followed on all executive branch department, agency, commission, program, and enterprise Web sites. In addition, this document contains recommendations and, where appropriate, explanations and references for further information. Each of the following standards and recommendations addresses one or more of three major areas: branding, accessibility, and functionality.

Branding is pivotal to the state's goal of providing a consistent, seamless look and feel to the state's Web presence. Branding encompasses matters of site architecture, navigation, layout, graphics, colors and fonts, minimum page elements, and consistent terminology, usage, and spelling.

Accessibility issues address the need to make all state Web pages accessible to three groups:

- people using various technologies (for example, browsers, search engines, operating systems, wireless systems),
- people with disabilities (including visual, mobility, and cognitive/language impairments), and
- people accessing our pages from other countries.

Accessibility issues affect layout and design, navigation, graphics and sound, use of software other than HTML, use of multimedia elements, file size, as well as usage conventions.

Functionality issues include content organization and presentation, adoption of common software, Web publishing tools, plug-ins, addressing schema, and file-naming conventions.

Starting immediately, the following standards and recommendations should be observed on all state Web sites. Additional guidelines regarding application development and accessibility are in development.

At all times, the latest version of the New Jersey State Web Site Standards and Guidelines can be found online at www.nj.gov/oit/standards/web/.

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SECTION I: WEB SITE ENVIRONMENT AND TOOLS

A. Server environment

STANDARD:

The state servers are Sun hardware running the Solaris operating system. For GIS systems there are a limited number of Windows NT and 2000 servers. More Windows server availability is expected shortly.

B. Desktop development environments

STANDARD:

The standard desktop development environments are Windows 95, 98, 2000, and NT; Macintosh V.8.0 and up.

C. Multimedia server environment

STANDARD:

Each department/agency should format its video and audio content to run on Real Player; if desired, OIT can do the formatting.

Explanation:

At this time, the state's standard streaming media format uses Real Networks encoding. The viewer must have the Real Player plug-in to view or hear the presentations. OIT has a RealMedia server for streaming these video, audio, and multimedia presentations. In addition, OIT supports SMIL (Simultaneous Multimedia Integration Language) for Real Systems G2. OIT hopes to offer other streaming media formats such as Windows Media, Quicktime, and MPEG in the future.

D. Web publishing tools

STANDARDS:

Departments and agencies should adopt Dreamweaver, from the Macromedia Web Design Studio Suite, as the common software for the state. Adobe Acrobat is the standard tool for PDF processing.

Recommendations:

Departments and agencies should also adopt the other products in the Macromedia Web Design Studio Suite: Fireworks, Flash, Freehand, and Course Builder. Textpad is the recommended external editor, WS_FTPLE is the recommended FTP software, and Adobe Photoshop is a recommended tool used to prepare photographic images for Web publishing.



E. Graphic/ image files

STANDARD:

The two standard types of image files to be used on Web pages are gifs and jpegs:

gif: A good format for images with solid flat colors or sharp and distinctive edges, such as text and line art. The gif format allows more control over each individual pixel. The gif format can be made into a transparent version of the graphic.

jpeg: This format is usually a better file format to be used for photographs. The jpeg format gives better control over quality of the photo in relationship to compression of the photo.

Whether you are using the gif format or the jpeg format, do not turn gif files into jpegs or vice versa.

example/gif



example/jpeg



SECTION II. CONTENT ORGANIZATION/SITE ARCHITECTURE

STANDARD:

Content on each department/agency site should be organized with reference to the audience — that is, to the user's needs and interests — which may but very often will not correspond to the internal organization and division of responsibilities within the department/agency.

Recommended Process:

STEP ONE: Define your audience very clearly. Do your users include professional groups, businesses, organizations, and/or individual citizens? Within the state government, are there agencies, departments, or other groups who will use your site? Do you have internal (Intranet) users, external (Internet) users or both? How will they use your site?

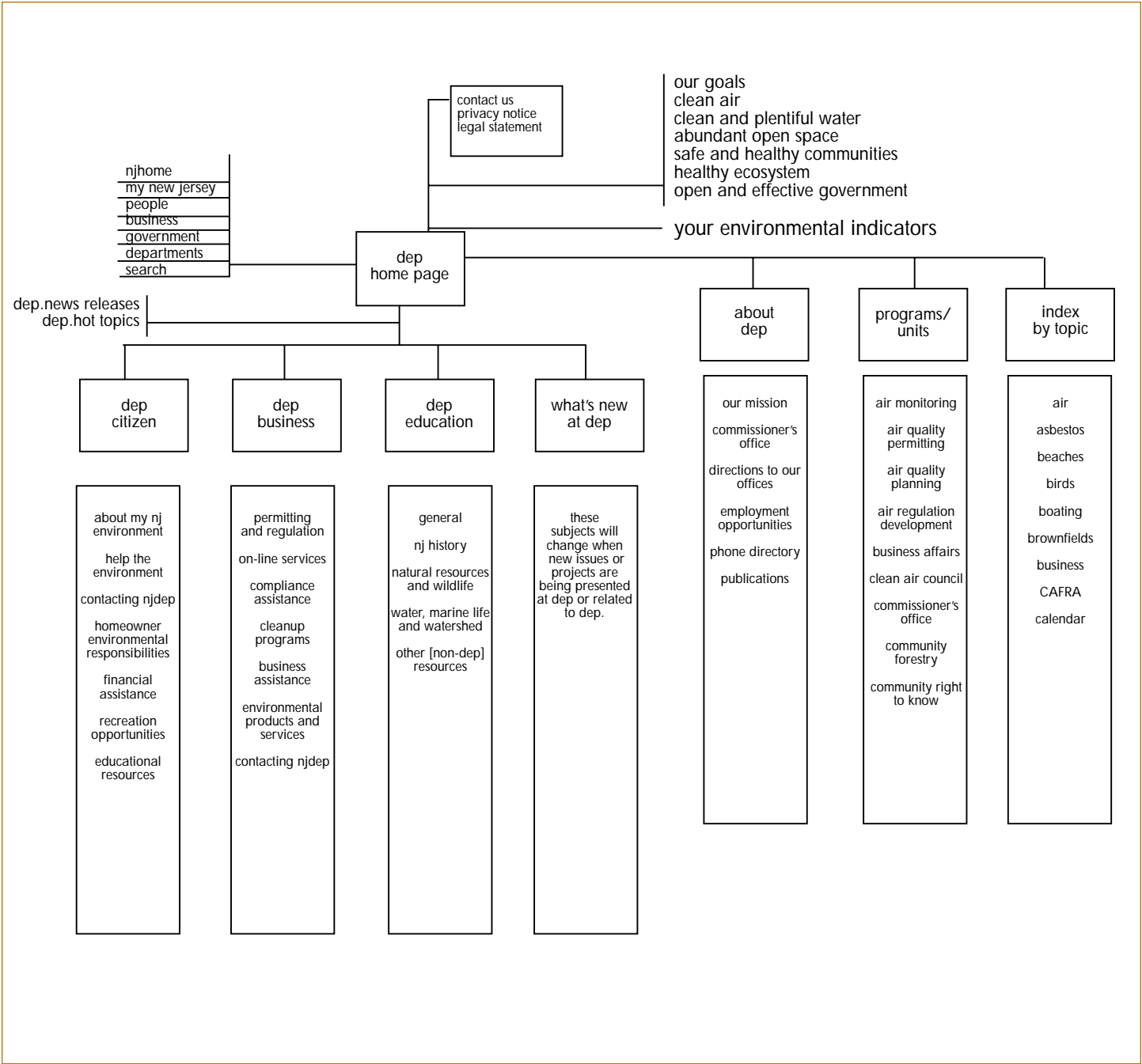
STEP TWO: Gather all your content and develop a clear outline of logical groupings (from the point of view of the types of users) before starting a design. Write a description of the site, indicating its purpose, goals, major topics, method of dividing the content, and how that method serves your users and your goals.

STEP THREE: Once the content is reviewed and revamped and the over-all purpose of the site is defined, a site architecture (see example, page 7) can be developed and used as the basis for a site design.

Develop a hierarchical organization of your content, moving from broader categories on the top page to more detailed categories and content on secondary and subsequent pages. (Don't try to put links to your entire site on the home page; too many links can overwhelm the user.) As a rule of thumb, users should be able to reach any specific content on your site within four clicks; however, the logic and ease of following the path is more important than the number of clicks it takes to get to the information.



example/site architecture



SECTION III. CONTENT TEXT – WRITING/STYLE/PRESENTATION

A. Common elements and conventions

STANDARDS:

1. Each department/agency Web page should contain
 - a plainly worded, descriptive page name (title) at the top,
 - authorship (by department or agency) information, preferably with date of last revision, at the bottom, and
 - clear navigational information. (See Section IV: State Branding Requirements, page 12.)

Explanation:

Since a user may reach any given page from a search engine without first visiting the site's home page, and since a user may print out any given page, Web pages must be more able to “stand alone” than those in print media.

2. State department/agency Web sites should follow the accepted conventions of Web writing. For example,
 - the page name should match the name of the link used to reach the page,
 - nothing on the page should be underlined that is not a link,
 - links should be easy to identify — either underlined or indicated by a triangle/arrow to the left of the first word of the link.
3. State department/agency Web sites should follow the standardized terminology, spelling, and usage formats provided in the attached glossary (Appendix A).

B. Structure

STANDARDS:

1. Avoid wordiness.

Recommendation:

After writing a section, try to take out half of the words. Leave only the words necessary for clarity and quick comprehension. Also avoid long, convoluted sentences. (This does not mean “dumbing down” the content, however.) Long “Welcome” messages and instructions are seldom read by users and should be avoided or at least “linked to” rather than being placed on the top page.

2. All text on state department/agency sites should be clear, accurate, well-organized, and timely. “Hook” the user by putting the most important information at the top, with more explanatory, detailed information further down (the “inverted pyramid” style of writing).
3. Break up blocks of text intended for online reading into logical chunks and structure them for scanning. Headings, sub-headings, and bullets can help accomplish this. (See exceptions in 5, page 9.) Make sparing use, however, of bold face, all caps, and italics.



4. Observe rules of parallelism. When writing a list or series, each item should structurally match the others. For example, structure all items in complete sentences, or all in fragments beginning with an action verb, or all as nouns (names of things).

Poor wording

- Course listings
- You can register online.
- Getting directions

Fix #1

- Find course listings
- Register online
- Get directions

Fix #2

- Course listings
- Online registration
- Directions

Fix #3

- Finding course listings
- Registering online
- Getting directions

5. Conventional linear prose is completely appropriate on the Web in certain circumstances — for example, policy statements, reports, feature articles, course descriptions. In those instances, however, recognize that the pages are intended for printing and reading off-line; make sure that the pages are printer-friendly.

6. Avoid calling attention to the conventions of the Web or to the mechanics of Web navigation. Avoid using phrases such as “click here,” “follow this link,” or “select this option.” Write the sentence as you normally would, and place the link anchor on the most relevant word or short phrase in the sentence.

Poor

[Click here](#) for more information on finding emergency assistance .

Better

Find information on [emergency assistance](#).

Or Various agencies provide [emergency assistance](#).

7. Do not place links near the top of your text — or sprinkle lots of links throughout your text. Such links are distracting and invite users to go elsewhere before they have finished reading your information. Put only the most important links within the main body of your text. Group all illustrative, parenthetical, or footnote links at the bottom of the document or in a sidebar, where they are easy to find but not distracting.

C. Diction

STANDARDS:

1. Use words that are
 - direct
 - familiar to the public
 - informal without being “slangy,” “cute,” or “clever”
 - concise

Poor

NJ Statute 340-AZ.409 requires the submission of Form 303.

Course descriptions can be found by utilizing the [online inquiry](#) application.

Check out this cool info, just in!

Better

You will need Form 303.
Or Form 303 is required.

Use the [online inquiry](#) for course descriptions.
Or, even better Find [course descriptions](#).

Up-to-date advisories

2. Use strong, active verbs whenever possible. Imperatives are more effective than gerunds.
3. Avoid “agency-speak” and bureaucratic phrases and words.
4. Write out the full name for each acronym the first time it is mentioned on every page. (Remember that a page deep in the site can be accessed directly through a search engine.) On the home page, write the term out fully at the first mention, with the acronym in parentheses. On secondary and deeper pages, do the same or use the acronym with the full name in parentheses.

For example:

First mention, OIT home page: “Office of Information Technology (OIT)”

First mention, deeper OIT pages: “OIT (Office of Information Technology)”
or “Office of Information Technology (OIT)”



D. Correctness

STANDARDS:

1. Ensure that all writing on a department/agency Web site (with the exception of some design elements*) conforms to standard rules of English grammar, punctuation, capitalization, spelling, and usage. See Appendix A for standardized terminology, usage, and spelling.

*The branded “look and feel” of the NJ Web presence involves using all lower-case letters and unconventional punctuation in some graphic design elements.

2. Proofread and copy edit Web pages carefully to correct typographical and other errors. Make corrections before putting the document into HTML and then proofread again after it is in HTML.

3. If in doubt about correct usage, consult one of the major manuals of style, such as The Associated Press Stylebook or The Chicago Manual of Style. See below for further sources of information about good Web writing.

Explanation:

Correct grammar, spelling, punctuation, and usage increase the clarity of the information presented. In addition, correct writing sends an implicit message of competence, attention to detail, and professionalism — all of which increase the user’s confidence in and respect for the information and the site.

E. References

The following Web sites and books provide more information about effective Web writing:

Yale “Web Style Guide” [http://info.med.yale.edu/caim/manual/sites/site_design.html]

Jakob Nielsen’s “Writing for the Web” [<http://www.useit.com/papers/writing>]

Jakob Nielsen’s “How Users Read on the Web” [<http://useit.com/alertbox/9710a.html>]

Official Sun Microsystems’ Guidelines Booklet, “Writing for the Web”

[<http://www.sun.com/980713/webwriting>]

University of Washington “Design of Web Sites” [<http://staff.washington.edu/rells/design/>]

Jutta Degener’s “Dangerous Words” [<http://kbs.cs.tu-berlin.de/~jutta/ht/writing/words.html>]

Kilian, Crawford. Writing for the Web. Also Crawford Kilian’s Web site

[<http://www.capcollege.bc.ca/magic/cmns/Webwrite.html>].

Krug, Steve. Don’t Make Me Think.

Strunk, William, and E.B. White. The Elements of Style.

Also available online [<http://sut1.sut.ac.th/strunk/>].

Zinsser, William. On Writing Well.

The Associated Press Stylebook and Briefing on Media Law

The Chicago Manual of Style: the Essential Guide for Writers, Editors, and Publishers (14th Edition)

SECTION IV. STATE BRANDING REQUIREMENTS

A. Common page elements

STANDARDS:

1. The common navigation bar should be incorporated on every page of each department/agency site. The state navigation bar includes links to, from left to right, *njhome*, *my new jersey*, *people*, *business*, *government*, *departments*, and *search*, with a text field.

example a/common navigation bar/secondary to state home page



example b/common navigation bar/department home page



example c/common navigation bar/secondary to department home page



2. Each department/agency page should contain a site ID in the upper left-hand corner.
3. Each department/agency page should contain a title. The title should match the link used to reach the page.
4. Each department/agency page should contain the state footer graphic element, placed flush right at the bottom of the page. The footer graphic contains links to *contact us*, *privacy notice*, and *legal statement* followed by the state Web site logo. The *contact us* link will bring up a form which will be customized to communicate with the appropriate department or agency. The *privacy notice* link will bring up the state privacy notice; on that page, users will be given the opportunity to click to any further information about privacy that may be supplied by a given department/agency. The *legal statement* link will bring up general state information about legal issues other than privacy.

example /footer graphic



5. Below the footer graphic and flush left, each page should contain “department:” (or “agency:”) followed by a repetition of the department (or agency) local navigation links, in HTML, font attribute size = 1. A division may place “division:” followed by its local navigation links directly above the department links, also flush left in HTML, font attribute size = 1. (See example, page 13)

6. Below the department local navigation links, each page should contain “statewide:” followed by the global navigation links (duplicated from the common navigation bar at the top of the page) in HTML, font attribute size = 1. (See example below.)

7. Below the footer graphic and flush left, each page should contain, in HTML, font attribute size = 1, the following identifying information: “Copyright © State of New Jersey [year(s)]”

Optional: Below the copyright statement, each page may contain the name and address of the department or department/division or agency, also flush left and in HTML, font attribute size = 1. (See example below.)

example/bottom of page information

```
department: njddep home | about dep | index by topic | programs/units | dep online  
statewide: nj home | my new jersey | people | business | government | departments | search  
  
Copyright ©State of New Jersey, 1996-2001  
Department of Environmental Protection  
P. O. Box 402  
Trenton, NJ 08625-0402  
  
Last Updated: September 26, 2001
```

B. Home page layout

OIT, Communications and Creative Services, is working with each department on a site design which will meet the state branding requirements. In conjunction with that project, each division should organize its home page layout and content using one of six templates. See the following examples.

example/completed department home page layout



example/division home page template one



example/division home page template two



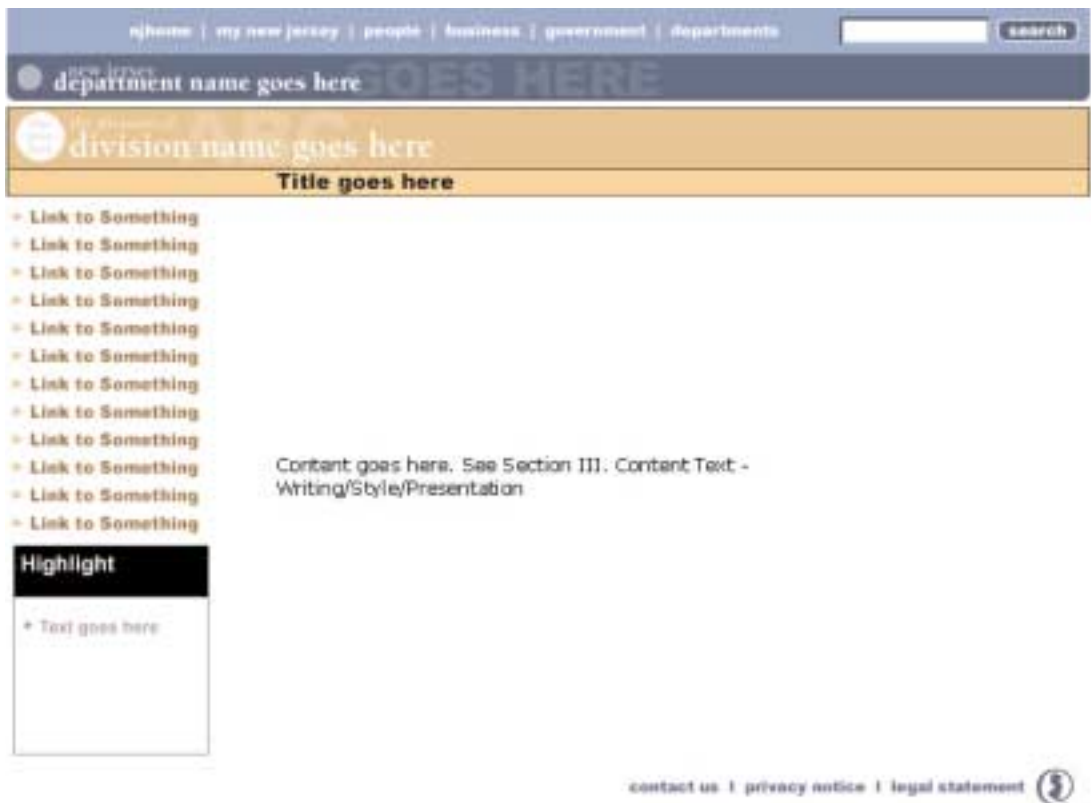
example/division home page template three



example/division home page template four



example/division home page template five



example/division home page template six



C. Page size

Recommendation:

The recommended page size is 700 x 410 pixels.

Explanation:

Most computer systems come with the screen resolution set at 800 x 600 pixels, and the browser framework takes up some of that space. The remaining viewing area is roughly 700 x 410.

D. Font style and size (non-graphical elements)

Recommendations:

The following choices support the state's branding initiative with respect to the text within a Web site page:

For the heading: font times new roman; size: 4

For the sub heading: font arial; size 3

For the body: font georgia, times new roman; size: 2

For links: font arial; size 3

Examples can be found on *new jersey...open for business* [<http://www.nj.gov/njbiz/>]

E. Colors

STANDARD:

Departments/agencies should select colors from the Web-safe palette for text, background, and images.

Explanation:

The Web-safe palette is made up of the 216 colors that are used by both Macintosh computers and PCs as well as by the major browsers. The browser will “dither” or simulate the display of colors not from the Web-safe palette, which can result in unsatisfactory visual results.

Recommendation:

The Web branding colors used on the state portal [www.nj.gov] demonstrate a design based on three colors. Sticking to two, three, or four colors helps when designing your own site and supports the statewide general branding initiative.



The following three colors are used on the state portal and major channels: *new jersey people, new jersey...open for business, government information*):

A dark blue, hexadecimal value 000033

A red, hexadecimal value 990000

A tan, hexadecimal value 999966

STANDARD:

Departments/agencies must ensure that use and selection of color do not negatively affect the information conveyed on a page.

- Information conveyed by color alone must also be available without color.
- The foreground and background colors must provide sufficient contrast to make the text easily readable.

Explanation:

Users who cannot differentiate between colors and users of non-color or non-visual displays will not receive information conveyed by color alone. Similarly, foreground and background colors too close in hue or luminosity may not be distinguishable when viewed by color blind users or on monochrome displays. Please visit Lighthouse International's brochure, "Color Contrast and Partial Sight," [http://www.lighthouse.org/color_contrast.htm] for more information.

F. Content Terminology and Usage

STANDARDS:

1. Although the branded "look and feel" of the NJ Web presence involves using all lower-case letters and unconventional punctuation in some graphic design elements, all other text on the state Web site is expected to conform to standard rules of English grammar, punctuation, capitalization, spelling, and usage.
2. State departments/ agencies should consult the attached glossary (Appendix A) for statewide terminology, spelling, and usage.
3. State departments/ agencies are responsible for proofreading and copy editing their Web site pages and correcting typographical and other errors. (See also Section III: Content Text — Writing/Style/Presentation.)

SECTION V: WEB PUBLISHING CONVENTIONS

A. Navigation

STANDARDS:

1. A state Web page must use clear, consistent, “branded” navigation mechanisms. (See Section IV: State Branding Requirements).
2. Each image link or button should be accompanied by a label which clearly indicates its purpose. Image links and buttons should not blink or move. (See Section V, L: Use of motion, page 27.)
3. To ensure that no gaps exist in the search of your site, set up invisible links to anything that is referenced from image maps, JavaScript, or Flash links.

For example:

```
<a href="www.nj.gov/njra/programs.html"></a> or  
  <a href=" ../programs.html"></a>.
```

There is nothing clickable on this type of link, so it is invisible to the user but readable to a search spider. This type of link can be embedded on any HTML page.

Explanation:

Search spiders and robots index a site by following links from a starting page (on the public access server this will be the state home page) to all of the linked subordinate pages.

However, spiders and robots cannot read image map, JavaScript, or Flash links. As a result, without invisible links, a lot of subordinate pages may not be indexed by the search engine and the users may not find what they need.

4. HTML selection boxes or JavaScript flyout menus are two methods that can be used to categorize links to avoid too many choices being displayed at one time. If the site is public or you know that not all of your users have 4.0 or higher browsers, use only HTML selection boxes or use a JavaScript or Flash sniffer to redirect the older browsers to alternative pages with HTML links.

Explanation:

HTML selection boxes can be used by all browsers. However, Javascript and Flash links are not readable by most search spiders and robots or by the speech synthesizers used by the visually impaired. They also don't work with some older browsers (pre 4.0 browsers). This is an example of why it is important to know your user. If the site is internal and you know all of the users have 4.0 or higher browsers, this may not be an issue.



B. Opening new browser windows

STANDARD:

On state department/agency Web sites, any new browser window that opens (e.g., when linking to an external Web site) should be smaller than the original window.

Explanation:

On new windows the “back” button is disabled; if the window is full-sized, the user can easily become confused and uncertain how to return to the state site. If further clicking opens still more full-sized windows, the confusion is compounded. Sizing the new window smaller than the original enables the user to retain sight of the state global navigation bar and thus realize that a new window has opened that is not part of the state site.

C. Limiting file size

STANDARDS:

1. State department and agency sites should contain graphics designed so that the file size of the whole page will be small, somewhere between 30 and 60 k.
2. Long HTML documents should be organized so that they can be broken up into shorter documents. For example, a listing of 300 items could be broken up into blocks of 50 or fewer items per page with “previous 50” and “next 50” buttons available for navigating among pages.

Explanation:

An HTML total page size includes the HTML page itself plus all graphic elements, multimedia elements, and text. The total file size makes up the over-all page size which in turn determines loading time. HTML pages perform as well as inform. To do this effectively, the total page and all its elements should be kept within reasonable bounds. Additionally, many users object to the large amount of scrolling required by long HTML pages.

D. Optimizing images

STANDARDS:

1. In order to reduce the file size, optimize color depth and resolution (by reducing color depth and increasing jpeg file compression) as much as is possible without degrading the display quality of the image to an unacceptable level.
2. Create graphic files with the dimensions that will be used when displayed; do not constrain image display size by using the height and width attributes of image or table tags.

Explanation:

Images that are not optimized tax slow modem connections because they take unnecessarily long to download. Most monitors display a resolution of only 72 pixels per inch, although some high-end systems display 96 pixels per inch. It is usually possible to reduce the color depth (number of colors stored in the file) for gif files and to increase the compression of jpeg files. Optimizing can greatly reduce the file size without affecting the quality of the displayed image.

E. Use of HTML

STANDARDS:

1. Whenever possible, state departments/agencies should publish all information in HTML.

Explanation:

Publishing all information in HTML eliminates the need for additional software. Many users may be unauthorized or too uncomfortable to download and install new software, or they may encounter installation problems or software conflicts. In addition, the alternative formats — audio or video files without text equivalents, PDF files — are inaccessible to users who are hearing-impaired or blind.

2. State Web pages must use HTML mark up tags properly. Departments/agencies should use the officially sanctioned HTML tags as established by the W3C [<http://www.w3c.org>] to promote consistency and accessibility across all Web sites.

Specifically:

- Avoid the misuse of tags to convey formatting.
- Avoid using images to represent text — use text and style sheets instead.
- When needed, use tables for layout as long as the screen readers used by the blind can accurately translate the information. Note that screen readers read table information across the screen, from left to right.

Common errors to be avoided:

- Paragraph break errors — Using a paragraph tag before a heading or list can cause unnecessary white space in your document.
- Missing quotes in links — Links that don't work can be the result of a missing quote mark in the link specification. The quote marks are small and easy to overlook in a long reference.
- Missing end tags — Some HTML tags are opening and closing pairs. Leaving out one or the other will result in strange looking documents. Using an HTML editor can be a great help in avoiding this mistake.

It is a good practice to use two or more browsers to review and test your pages. Control varies from one browser to another. Using at least two will give you an idea of what your readers may be seeing. (See Section V, Q: “Usability by various browsers/versions/technologies,” below.)

Explanation:

Using HTML tags (e.g., headings, lists, blockquotes, tables, etc.) to achieve desired formatting effects on a Web page relies on how a particular browser interprets the tags. Misusing tags or using them incorrectly can confuse the organization of a page, hinder navigation, and/or prevent accessibility.



F. Publishing elements other than HTML

1. JavaScript and Flash

STANDARDS:

a. If JavaScript or Flash is employed, departments/agencies should use browser version detection code to handle situations where an older browser may be encountered that does not support JavaScript or Flash.

b. JavaScript and Flash menuing as well as HTML selection boxes can be used to categorize links in order to avoid displaying too many choices at one time. State department/agency Web developers should use only HTML selection boxes or, if using JavaScript or Flash menuing, employ a JavaScript or Flash sniffer to redirect older browsers (pre 4.0) to alternative pages with HTML links.

Explanation:

Javascript and Flash links are not readable by most search spiders and robots or by the speech synthesizers used by the visually impaired. They also don't work with some older browsers (pre 4.0 browsers). HTML selection boxes, on the other hand, can be used by all browsers.

2. Cascading Style Sheets

Recommendations:

a. A department/agency Web page should control presentation with style sheets.

Explanation:

Style sheets enhance accessibility by more precisely controlling layout and appearance, making Web pages easier to follow for users with various disabilities as well as for the general public.

b. Link to external style sheets rather than using embedded ones.

Explanation:

Cascading Style Sheets (CSS) is a simple mechanism for adding style (e.g., fonts, colors, spacing) to Web documents. By attaching style sheets to structured documents on the Web (e.g., in HTML), authors and readers can influence the presentation of documents without sacrificing device-independence or adding new HTML tags. Only by referencing an external file (linking) will you get the maintenance benefits of being able to update the look of your entire site with a single change. You should still be able to read the HTML page if the cascading style sheets are turned off.

Reference and Information:

W3C Cascading Style Sheets [<http://www.w3.org/Style/CSS/>]

Web Standards Project Resources [<http://www.webstandards.org/css.html>]

Jim Powers presentation for SMUG [<http://imweb04.nj.gov/smug/internet/css/index.html>]

3. Common Gateway Interface (CGI) scripts

STANDARD:

The state system supports Common Gateway Interface (CGI) scripts.

General information:

Common Gateway Interface Programming [<http://imweb04.nj.gov/smug/internet/fredcgi.htm>]

4. PDF files

STANDARDS:

- a. The Adobe Acrobat Portable Document Format (PDF) should be used only for documents that are intended for printing or distribution without change, such as official documents and forms. Information, not including forms, that must be published in PDF should also be published in HTML.
- b. If PDF format must be used, the department/agency Web page should provide a link to the state Adobe Access page [<http://www.nj.gov/acrobat.htm>] for downloading the needed software.
- c. When linking to a file in PDF format, the department/agency Web page should identify it as a PDF file and indicate its size.

Explanation:

PDF files are often difficult to read on the screen. They are not optimized for display in a browser window, they lack navigation bars, and, typically, they also lack hypertext. Secondly, at the present time, information published in PDF format is not accessible to the screen readers used by visually-impaired users. Thirdly, downloading and installing additional software may be uncomfortable or impermissible for some users. Usability expert Jakob Nielsen estimates that making users browse PDF documents reduces a site's usability by about 300%. (See Jakob Nielsen, "Avoid PDF for On-Screen Reading" [<http://www.useit.com/alertbox/20010610.html>].)

G. Use of layers

STANDARD:

State departments/agencies should not use layers for publication purposes.

Explanation:

Layers do not print well.



H. Use of frames

STANDARD:

Departments/agencies should avoid using frames on their Web pages.

Explanation:

Frames should be avoided for a number of reasons:

- Frames can be spoofed (unauthorized parties can post information in a state page frame).
- People with cognitive disabilities and visual disabilities often have difficulty interpreting pages built with frames.
- Frames are difficult to print.
- The major search engines do not index sites using frames.

Recommendations to follow when frames are used:

- Title each frame to facilitate frame identification and navigation.
- Describe the purpose of the frame and how each frame relates to another if the frame titles alone don't make that clear.
- Do not create a situation in which users are required to install a frame-enabled browser in order to view the information in a frame.
- Include a link that provides navigation options when frames are turned off on a page.

I. Naming of files

STANDARDS:

1. Naming your home page

A department/agency home page (i.e., top level page) must be named “index.html” or “index.shtml” or “index.htm” or “home.html”. The first two are preferred.

Explanation:

The Web server is configured to serve pages named “index.html” or “index.shtml” or “index.htm” or “home.html” as defaults. Thus the reference <http://www.nj.gov/treasury/> will serve the “<http://www.nj.gov/treasury/index.html>” page. The file type “.shtml” is used to let the server know to parse this file for server side includes. Eventually, file types “.jsp” and “.asp” may be used to create dynamic pages.

2. Referencing a department/agency home page

Links to a department/agency home page from within its site should be relative when possible and should end in the directory name rather than the file name. Thus, in the example given above, the link to the treasury home page would be “/treasury/”.

Explanation:

Since the server knows to send the “index.html” page, adding that to the link is not necessary. Ending the link reference with the directory name rather than the file name makes it

easier to change the file name of the home page to “.shtml” or “.jsp” at a later date, if needed.

3. Referencing the state home page

The correct reference to the state home page is as follows:

Absolute = <http://www.nj.gov/>

Relative = / (This is all that is needed. “/” is the root directory for the state’s server document hierarchy. Note that your pages must reside on the same server as the state home page to use this format.)

4. Referencing njhome

The NJ home page (the NJ portal) should be referenced from the common navigation bar. Use of the “njhome.gif” image which resides in the /art/ directory on the server, at “/art/njhome.gif”, should be phased out as departments and agencies incorporate the common navigation bar into their Web sites.

J. Addressing of files

Recommendation:

For files located on the same server, a department/agency should use relative addressing within its site. A relative link is one that is usually in the current directory or in one above or below. The whole path name is not used.

Explanation:

Relative links have the advantage of being shorter and make your presentation more portable from one server to another. If all your links are local, it will not be necessary to change the links in the Web pages when the presentation is moved from your test environment to the public access server. If your links are absolute, each link will need to be changed before putting the presentation online. That kind of maintenance is an error waiting to happen. Because of the issues of portability and ease of maintenance, relative links are recommended for all your documents kept on the same server.

Some examples of relative links:

Here is a new page. This link would go up one level to the directory above. This link appears in a page called “relative.html” in the following directory structure:

```
/toplevel/  
  newpage.html  
/toplevel/secondlevel/  
  relative.html [contains above link to “newpage.html”]  
  alsorelative.html
```

The reference will go up one directory to the “newpage.html” file. A reference to the “alsorelative.html” file will look like Here is a link.

Note: If you are using Dreamweaver, the relative linking is set automatically.



K. Use of alt tags

STANDARD:

For every image on a state department/agency Web page, an alternative text attribute in the image tag (“alt”) must be used. The alt tag must sufficiently describe the image so that a person unable to see the image can understand the content and meaning for its use. The term “image” includes pictures, graphical representations of text (including symbols), image map regions, animations, scripts, applets, programmed objects, ASCII art, frames, images used as list bullets, spacers, graphical buttons, sounds, stand-alone audio files, audio tracks of video, and video. The alt tag text on a link should not start with “link to” because the screen-reading programs automatically supply the words “link to.” (For example, if your alt tag reads “link to Form 300004,” the screen reader will read “link to link to Form 30004.”)

Explanation:

Text equivalents for images can be accessible to people with various disabilities and using various technologies. Text can be readily output to speech synthesizers and Braille displays and can be presented visually in different sizes on computer displays and on paper. Screen-reading assistive technologies (which synthesize speech) are used by individuals who are blind and by many people with the reading difficulties that often accompany cognitive and learning disabilities. Braille is essential for individuals who are both deaf and blind, as well as many individuals whose only sensory disability is blindness.

Please note that creating a separate text-only page is the least desirable way to address this issue. Graphics and sound can be useful and attractive enhancements to a Web page, and non-text equivalents (for example, pictures, graphics, videos, and re-recorded audio) of text are beneficial for users who are non-readers or who have difficulty reading. The goal is to create one page which transforms gracefully, remaining accessible despite physical, sensory, cognitive, situational, or technological constraints. A text equivalent alt tag will make an image accessible.

L. Use of motion

STANDARD:

State departments and agencies should avoid using motion on their Web pages whenever possible. Any motion used on a state Web page must be integral to the content of the site, user-controlled, and limited to three cycles before stopping automatically.

Explanation:

State departments and agencies are strongly discouraged from using motion (i.e., animated graphics, blinking text, scrolling banners, and auto-dating objects and pages) on their Web sites for a number of reasons:

- People with photosensitive epilepsy can have seizures triggered by flickering or flashing in the 4 to 59 flashes per second (Hertz) range with a peak sensitivity at 20 flashes per second as well as by quick changes from dark to light (like strobe lights).

- Some people with cognitive or visual disabilities are unable to read moving text quickly enough or at all.
- Movement can also cause such a distraction that the rest of the page becomes unreadable for people with cognitive disabilities.
- Screen readers (used by the blind and visually impaired) are unable to read moving text.
- Some people with physical disabilities cannot move quickly or accurately enough to interact with moving objects.

M. Use of meta tags

Recommendation:

State sites should use meta tags to specify a “description” and “keywords” by which search engines will index the page. In addition, state sites should use meta tags to maintain information regarding the creation and modification dates of a document.

Explanation:

A meta tag is an HTML tag used in the <head> area of a document to specify further information about the document, either for the local server or for a remote browser.

Information and Reference:

Meta Tag FAQ [<http://www.builder.com/Authoring/Metadata/>]

How to Use Meta Tags [<http://www.searchenginewatch.com/webmasters/meta.html>]

N. Use of mailto tags vs. HTML/CGI contact forms

STANDARD:

The mailto tag, often used for feedback, should be replaced with links to an e-mail form using a CGI (Common Gateway Interface) script because some users/readers do not have their own e-mail accounts or isp.

Explanation:

The following should **not** be used :

```
<a href="mailto:pat.jones@oit.nj.gov">Contact Pat Jones</a>
```

Instead, **use** the following:

```
<a href="feedback.html">Contact Pat Jones</a>
```

This second method links the user to an HTML form which will use a CGI script to send the mail. Both methods are supposed to accomplish the same thing, but the e-mail form method is the only one that is sure to work for everyone.

An example of a CGI contact form comes up after the user selects “contact us” on the Governor’s Web site [www.nj.gov/governor/contact.shtml]. The perl script code for this page is currently available at imweb04.nj.gov/docs/govmail_script.doc.



O. Use of “under construction” links

STANDARD:

Department/agency Web sites should not use links to “under construction” pages. If a page is under construction, this fact should be plainly displayed on the referring page so that users don’t attempt to go to the page at all, or it should just be removed completely from the referring page to avoid any confusion.

Explanation:

Users with slow connections will waste time waiting for a page to load and then find that there is nothing there.

P. Usability by search engines

STANDARDS:

1. To insure that no gaps exist in the search of your site, set up invisible links to anything that is referenced from image maps, JavaScript, or Flash links.

For example:

```
<a href="www.nj.gov/njra/programs.html"></a> or  
      <a href=".../programs.html"></a>.
```

Since nothing on this type of link is clickable, it is invisible to the user but readable to a search spider. This type of link can be embedded on any HTML page.

Explanation:

Search spiders and robots index a site by following links from a starting page (on the public access server this will be the state home page) to all of the linked subordinate pages.

However, spiders and robots cannot read image map, JavaScript, or Flash links. Without invisible links, a lot of subordinate pages may not be indexed by the search engine and the users may not find what they need.

2. JavaScript and Flash menuing as well as HTML selection boxes can be used to categorize links in order to avoid displaying too many choices at one time. State department/agency Web developers should use only HTML selection boxes or, if using JavaScript or Flash menuing, employ a JavaScript or Flash sniffer to redirect older browsers (pre 4.0) to alternative pages with HTML links.

Explanation:

Javascript and Flash links are not readable by most search spiders and robots or by the speech synthesizers used by the visually impaired. They also don’t work with some older browsers (pre 4.0 browsers). HTML selection boxes, on the other hand, can be used by all browsers.

Reference and Information:

W3C Cascading Style Sheets [<http://www.w3.org/Style/CSS/>]

Web Standards Project Resources [<http://www.webstandards.org/css.html>]

Jim Powers presentation for SMUG [<http://imweb04.nj.gov/smug/internet/css/index.html>]

3. State sites should use meta tags to specify a “description” and “keywords” by which search engines will index the page.

Reference and Information:

Meta Tag FAQ [<http://www.builder.com/Authoring/Metadata/>]

How to Use Meta Tags [<http://www.searchenginewatch.com/webmasters/meta.html>]

4. One reason that state departments/agencies should avoid using frames on their Web pages is that the major search engines do not index sites using frames.

Q. Usability by various browsers/versions/technologies

STANDARD:

All department/agency Web sites should be tested for compatibility and ease of use on Netscape Navigator and Microsoft Explorer, at the minimum.

Recommendation:

In addition, department/agency Web sites should be tested on different versions of Netscape Navigator and Microsoft Internet Explorer. Browser and version detection codes should be included in any Web page that uses elements that may not work with older browsers (for example, JavaScript). Give consideration to testing on PC and Mac operating systems. Also consider testing sites/pages using connections of varying speeds (for example, phone modem, cable, T1) to see that pages don't take too long to load.



APPENDIX A: TERMINOLOGY, USAGE, AND SPELLING

STANDARD: As much as possible, terms should be used and spelled the same way across the state Web presence. The following list of standard usages may be adjusted and expanded as time goes on.

date format: avoid expressing dates as three numerals divided by forward slashes (e.g., 6/11/01); internationally, this format can mean November 6, 2001, not June 11, 2001. Use the name of the month wherever possible; for example: July 4, 1998, or Jul-4-98.

download: one word, no hyphen

e-mail: spelled with a hyphen

e-government: spelled with a hyphen, lower case “e” and lower case “g.” At the beginning of a sentence, spelled “E-government.”

e-services, e-commerce, e-voting, e-signature, and like constructions: same conventions as in “e-government”

home page: two words

HTML: for “hyper-text markup language”; use capitals when using the term in a phrase or sentence; use lower case letters at the end of a URL, or if for some reason it is placed at the end of a hyperlink. (E.g., “Find [course listings](#) [html].”)

interactive: one word, no hyphen

Internet: always capitalized (it is a proper name)

Intranet: capitalized unless referring to the generic concept of intranets

multimedia: one word, no hyphen

online: one word, no hyphen

PDF: for “portable document file”; use capitals when using the term in a phrase or sentence; use lower case letters when placed at the end of a hyperlink. If used at the end of a hyperlink, include the file size. (E.g., “Find [course listings](#) [pdf 10k].”)

phone number format: divide with hyphens or periods (international convention); do not use parentheses. That is, either of the following is correct: 888-555-1010 or 888.555.1010.

portal/channel: use “portal” to refer only to the state home page: www.nj.gov. The opening page for other state sites should be called the home page of that site. Major paths of information on the state portal (e.g., *new jersey people*, *new jersey...open for business*, *government information*) are called “channels.” Neither “portal” nor “channel” should be capitalized except at the beginning of a sentence.

site map: two words

state: the word state is spelled with a lower case “s” — for example, “Trenton is the capital of the state,” “state legislators.”

Web: always capitalized when referring to the World Wide Web.

Web-enabled: hyphenated with upper case “W.”

Web page: preferred form is two words with upper case W.

Web site: preferred form is two words with upper case “W.”



APPENDIX B ABOUT THIS DOCUMENT

The New Jersey Office of Information Technology developed the New Jersey State Web Site Standards and Guidelines after consultation with many sources, including state Web writers, designers, and developers as well as outside experts. Along with the references mentioned within the document, the following were primary sources of information used in the formation of the guidelines:

The Rutgers “New Jersey Online Project Web Site Analysis,” 2001.

Krug, Steve. Don't Make Me Think. New Riders Publishing: Indianapolis, Indiana, 2000.

Consultation with Kathleen De Sousa, Usability Analyst, Sengen, Inc.

W3C “Web Content Accessibility Guidelines 1.0,” 1999

Useit.com: Jakob Nielsen's Website [<http://www.useit.com>]

Yale “Web Style Guide” [http://info.med.yale.edu/caim/manual/sites/site_design.html]

University of Washington “Design of Web Sites” [<http://staff.washington.edu/rells/design/>]

Official Sun Microsystems' Guidelines Booklet “Writing for the Web”

[<http://www.sun.com/980713/webwriting>]

Jutta Degener's “Dangerous Words” [<http://kbs.cs.tu-berlin.de/~jutta/ht/writing/words.html>]

Kilian, Crawford. Writing for the Web. Self-Counsel Press: Bellingham, Washington, 1999.

Also Crawford Kilian's Web site [<http://www.capcollege.bc.ca/magic/cmns/Webwrite.html>].

“World Wide Web Home Page Guidelines and Best Practices,” prepared by the World Wide Web Federal Consortium, revised, November 1996.

Microsoft “Resource Guide for People with Cognitive/Language Impairments”

[<http://www.microsoft.com/enable/guides/cognitive.htm>]

Various other states' guidelines on Web publishing and accessibility